AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-274

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* AMSAT Symposium and Office Schedule
* PCSAT-1 Recovery
* PCSAT-1 Special Ops
* AMSAT Represented at NBC4 Connected Expo
* OSCAR 11 Report - 28 September 2006
* ARISS Status - 25 September 2006

SB SAT @ AMSAT $ANS-274.01
AMSAT Space Symposium and Office Schedule

AMSAT News Service Bulletin 274.01
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
BID: $ANS-274.01

The annual AMSAT Space Symposium will be held this week at the Crowne Plaza Mid-Peninsula conventiently located close to San Francisco International Airport. It is roughly equidistant between the cities of San Francisco, San Jose and Oakland. AMSAT is excited that our 2006 Symposium Keynote speaker will be astronaut Bill McArthur KC5ACR, ISS Expedition 12 Mission Commander and Science Officer. Commander McArthur is well known to ham radio operators and during his six months aboard the ISS he became the most active radio amateur ever to serve aboard the ISS. Commander McArthur logged more than 1800 QSOs in space, including logging a Worked All States Award. His impressive track record also included a record 37 school contacts, Worked All Continents (including Antartica) and 130 DXCC entities. Commander McArthur will present his keynote address during the Symposium Banquet on Saturday October 7. To register for the Symposium and Banquet please visit the AMSAT Online Store. Complete Symposium details are available at:
http://www.amsat.org/amsat-new/symposium/

The AMSAT Office will be closed on Monday, October 2nd 2006. The office will reopen on Tuesday and then close again for the remainder of the week on Wednesday, October 4th while AMSAT Office Manager, Martha Saragovitz, travels to California for the AMSAT Board of Directors meeting on October 5-6 which proceeds the Space Symposium. The office will reopen on Monday, October 16th.

[ANS thanks Emily, N1DID, and Martha for the above information]

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SB SAT @ AMSAT $ANS-274.02
PCSAT-1 Recovery

AMSAT News Service Bulletin 274.02
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
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PCSAT-1 has been recovered as it entered better sun angles.

PCSAT-1 should remain NORMAL OPS for the next few weeks until it experiences an overload and resets. Then it will be lost until December. All users are asked to please adhere to these fundamental principles:

1) No connections to or through PCSAT-1
2) UI digipeating and APRS packets only about a 1 minute rate
3) Watch pcsat.aprs.org for live activity
4) Use the path of VIA PCSAT-1 or VIA ARISS
5) Minimize all packets after dark!

Enjoy PCSAT-1 and APRS! Make contacts, QSO, enjoy!

Just remember that ACKS are pretty useless and only add QRM to the channel. So do not expect ACKS via the satellite. If you see your outgoing packet digipeated by PCSAT-1 a few times then you should ASSUME that the other person got it and delete it yourself. By the same token, if someone sends you a message, then ANSWER him in kind, so that he knows you got it.

[ANS thanks Bob, WB4APR, for the above information]

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SB SAT @ AMSAT $ANS-274.03
PCSAT-1 Special Ops

AMSAT News Service Bulletin 274.03
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
BID: $ANS-274.03

Bob Bruinga, WB4APR, with the US Naval Academy Satellite Lab provided the following update on PCSAT-1 special operations.

We now welcome routine trackers and unattended beacons so that we can build up statistics on channel loading and the channel capacity of PCSAT-1 and it's follow-on spacecraft. We do want everyone to include basic info in their packet though. Please include PWR,Antenna Gain, and RATE. Such as "5W,3dbi,5min" so that the statistics will show us what works...

PCSAT-1 works like any APRS digipeater so the only thing you have to do, to work the satellite is to change your APRS (or packet station) channel to 145.825 instead of its normal frequency. When you get to work, QSY to 145.825 during the day, and when you get home. Its nice to look at your mobile radio and see who else you captured after work or overnight.

For unattended, set your beacon rate to once ever 5 minutes. If

attended and monitoring the channel, you can use 2 minutes. You can see if you got in on http://pcsat.aprs.org . Watching the capacity of PCSAT-1 to carry these data will be usefull for gauging the success of our next satellite, ParkinsonSAT. See http://www.ew.usna.edu/~bruninga/buoy.html

PCSAT-1 responds to most common digipeating callsigns (below) so that no one should have to change anything when going between terrestrial or ISS operation to PCSAT-1, other than their frequency.

- PCSAT-1
- RELAY
- WIDE
- WIDEn-N
- ARISS
- TRACEn-N

We saw 22 people yesterday on the East Coast and the web page above, is showing about 70 in the last 2 days. PCSAT-1 should be able to handle 100 or so per footprint PER PASS! So lets get the number of users up for the next 2 weeks of useful PCSAT-1 life.

See web page PCSAT.APRS.ORG or Google for PCSAT.

[ANS thanks Bob, WB4APR, for the above information]

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SB SAT @ AMSAT $ANS-274.04
AMSAT Represented at NBC4 Connected Expo

AMSAT News Service Bulletin 274.04
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
BID: $ANS-274.04

Amateur Radio and Amsat were represented at the 6th annual "NBC4 Connected Expo" in downtown Washington DC on September 16 and 17. This event is sponsored by local television station WRC channel 4 in Washington and hosted by their on-air technology reporter I.J. Hudson, K9ICF.

25,000 people attended the event over the two days that it was open. The ham radio exhibit was located just around the corner from a robotics demonstration that drew a large number of technically inclined young people.

The general public really has little idea what ham radio is all about and often confuses hams with CB operators or thinks of hams as old men who tap out messages in morse code on vacuum tube radios. Many believe that ham radio is no longer useful or relevant in the age of cellular telephones and the internet. Comments that were heard during the weekend included "Look at the fancy cell phone!", "My father was a ham when I was young" and "I didn't know you still did that". Many visitors were surprised to learn that ham radio is still alive and well and fully up to date with modern technology. A few lapsed hams also thought about getting back into amateur radio after stopping at the exhibit.

The fact that hams build satellites and talk to astronauts in space was a major part of the exhibit. These are two things that citizens band operators and cellular telephone users don't do. A recent ARISS contact between astronauts and school children played almost continously during

the expo to draw people into the exhibit.

The exhibit also stressed the technical opportunities that are available in ham radio, that hams can design, build and modify their own transmitters and other equipment and that amateur radio provides practical electronics experience and is a great way to get a head start in a science or engineering career. Displays also showed off the public service abilities of hams and stressed that ham radio still works after all other communication systems have failed.

Visitors who were interested in learning more about amateur radio were directed to one of the many local radio clubs in the Washington area that offer licensing classes and exam sessions. Although the outcome of the exhibit cannot be accurately measured, we do know that last year's exhibit did produce one new ham that we know of, and possibly more that we don't know about.

[ANS thanks Dan, N8FGV, for the above information]

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SB SAT @ AMSAT $ANS-274.05
OSCAR 11 Report - 28 September 2006

AMSAT News Service Bulletin 274.05
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
BID: $ANS-274.05

OSCAR-11 REPORT

28 September 2006

NOTHING HEARD FROM OSCAR-11 DURING SEPTEMBER ... REPORTS REQUESTED!
Please post reports to AMSAT-BB or e-mail to xxxxx@amsat.org (replace xxxxx by g3cwv).

During the period 14 August 2006 to 28 September, the satellite was heard from 16 to 26 August. The beacon was expected to switch ON ten days or 20 later, ie. around 05 or 15 September. However, it has not been heard since 26 August.

During the last ON period, the real time clock showed various errors. The date on 16 August was 51 July. By 26 August it had incremented to 60 July. The hours were also showing an erratic behaviour. Over short periods of time, ie. during a pass, the minutes and seconds appeared to be incrementing correctly

I am indebted to Jeff KB2M, Peter ZL3TC and Dave G1OCN, for their reports and for monitoring the satellite, especially during the last two weeks while I have been away on holiday. Many thanks.

The status of the satellite, when last heard, was that all the analogue telemetry channels, 0 to 59 are zero, ie they have failed. The status channels 60 to 67 were still working. The spacecraft computer and active attitude control system have switched OFF, ie. the satellite' attitude is controlled only by the passive gravity boom gradient, and the satellite is free to spin at any speed. When telemetry was last received it showed that one of the solar arrays had failed, and there was a large unexplained current drain on the main 14 volt bus. After 22 years in orbit the battery has undergone around 100,000 partial charge/discharge cycles, and observations suggest that it cannot power the satellite

during eclipses, or sometimes during periods of poor solar attitude.

The watchdog timer now operates on a 20 day cycle. During the three months before May (when the eclipses started), the ON/OFF times were very consistent, and the average of many observations show this to be 20.7 days, ie. 10.3 days ON followed by 10.4 days OFF. However, poor solar attitude may result may result in a low 14 volt line supply, which may cause the beacon to switch OFF prematurely, and reset the watchdog timer cycle. When this occurs, the beacon is OFF for 20.7 days.

The Beacon frequencies are -

VHF 145.826 MHz. AFSK FM ASCII Telemetry

UHF 435.025 MHz. OFF

S-band 2401.5 MHz. OFF

Listeners to OSCAR-11 may be interested in visiting my website. If you need to know what OSCAR-11 should sound like, there is a short audio clip for you to hear. The website contains an archive of news & telemetry data. It also contains details about using a soundcard or hardware demodulators for data capture. There is software for capturing data, and decoding ASCII telemetry. The URL is www.users.zetnet.co.uk/clivew/

If you place this bulletin on a terrestrial packet network, please use the bulletin identifier $BID:U2RPT125.CWV, to prevent duplication.

73 Clive G3CWV   xxxxx@amsat.org (please replace xxxxx by g3cwv)

[ANS thanks Clive, G3CWV, for the above information]

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SB SAT @ AMSAT $ANS-274.06
ARISS Status - 25 September 2006

AMSAT News Service Bulletin 274.06
 From AMSAT HQ SILVER SPRING, MD.
October 1, 2006
To All RADIO AMATEURS
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1. Swiss School Contact Successful

Thomas Reiter, DF4TR, spoke with students from the Gymnase Intercantonal de la Broye at the Musee de l'aviation militaire in Payerne, Switzerland on Friday, September 22. Eight students' questions were answered as 50 people gathered around the radio. Another 300 witnessed the contact in the hall where the event was transmitted on screen by amateur television (ATV). Media coverage included newspapers and television.

2. George Washington University Contact Successful

Space visitor Anousheh Ansari participated in a contact with her alma mater, George Washington University (GWU) in Washington, D.C. on Friday, September 22. As Ansari was Japanese participant, Dice-K Enomoto's back up on the Soyuz flight, she did not have time to get her U.S. license. Jeff Williams, KD5TVQ, acted as the control operator during the contact. Students from several area schools participated in the event: Eastern Middle School, Silver Spring, Md. (a NASA Explorer School); School

Without Walls Senior High School, Washington, D.C.; Stevens Elementary School, Washington, D.C.; and Thomas Jefferson High School for Science and Technology, Alexandria, Va. Six students were able to have their questions answered. The event was held in the GWU Marvin Center amphitheater where approximately 125 people gathered. Television stations Fox TV 5, ABC WJLA 7 and news channel 8 provided coverage of the GWU ARISS contact as did the Washington Post and some other local papers. See:
http://www.washingtonpost.com/wp-dyn/content/article/2006/09/22/AR2006092201496.html

Photos of the event may be viewed on:
http://artemis.crosslink.net/~pk/AMSAT/AMSAT-ARISS-9-22-06/

The contact video may be seen here:
http://video.google.com/videoplay?docid=-1789656846413123353

The university posted a press release of the event.
http://my.gwu.edu/mod/calendar/default.cfm?event_id=9660&option=view&day=09/22/06

3. ARISS - Illinois Contact, a Success

Astronaut Jeff Williams, KD5TVQ, had his own contact scheduled for September 22 with his crew-pick school, Crete-Monee Intermediate Center in Crete, Illinois. Nineteen students asked one question each as the entire student body of 800 children looked on. The Kankakee Amateur Radio Society provided streaming audio via W9AZ 146.94 repeater on http://www.w9az.com. Two television channels, 7 and 2 covered the event. Crete's local newspaper, The Star, posted an online article:
http://www.starnewspapers.com/star/spnews/cup/24-cup3.htm

4. Upcoming School Contacts

The ARISS team continues to work on scheduling the Expedition 14 school contacts.

5. ISS Makes General Contacts

Besides making the scheduled ARISS school contact with George Washington University, Anousheh Ansari has been making general contacts with stations in the USA and Canada using the callsign RS0ISS. News of her contacts has already hit the media. See:
http://www.canada.com/nationalpost/news/story.html?id=852560db-b97c-4565-afaf-01a1ca1e4fce&k=82481

6. ARRL Article Covers Hams Onboard ISS

ARRL ran a story on the shuttle astronauts visiting the ISS. The amateur radio payload PCSAT2 was picked up during an EVA and returned to Earth. "Five Radio Amateurs Now Aboard ISS; Power Upgrade, PCSat2 Retrieval Set" may be viewed on:
http://www.arrl.org/news/stories/2006/09/11/101/?nc=1

7. ARRL Covers Expedition 14 Launch

ARRL ran an article on the launch of the Expedition 14 crew. The story, entitled, "Shift Change: New Two-Ham Crew, First Female Civilian Visitor on Way to ISS" may be found at:

http://www.arrl.org/news/stories/2006/09/18/102/?nc=1

8. ARRL Press Release on Three ARISS Contacts

On Friday, September 22, three ARISS contacts were performed by three different people onboard the ISS. "ARISS Plans Triple Header of Ham Radio School Contacts" may be viewed on:
http://www.arrl.org/news/stories/2006/09/21/100/?nc=1

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73, This week's ANS Editor,
Lee McLamb, KU4OS